ENVIRONMENTAL CHEMISTS

Date of Report: 04/27/99 Date Received: 04/08/99

Project: Metro Self Monitor, PO# M78778

Date Samples Extracted: 04/23/99 Date Extracts Analyzed: 04/23/99

RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, ZINC USING METHOD 6010

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	Copper	<u>Nickel</u>	<u>Zinc</u>
M78778	0.50	0.49	0.48	< 0.05
Method Blank	<0.05	< 0.05	< 0.05	< 0.05

ENVIRONMENTAL CHEMISTS

Date of Report: 04/27/99 Date Received: 04/08/99

Project: Metro Self Monitor, PO# M78778

QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 904093-01 (Duplicate)

					Relative	•	
	Reporting	Sample		Duplicate	Percent	Accept	ance
Analyte	Units	Result	1.3	Result	Differen	ce Crite	ria
 Chromium	mg/L (ppm)	0.41	14	0.41	0	0-2	0
Copper	mg/L (ppm)	0.43		0.41	5	0-2	0
Nickel	mg/L (ppm)	0.39		0.40	3	0-2	0
Zinc	mg/L (ppm)	0.07		0.07	0	0-2	0

Laboratory Code: 904093-01 (Matrix Spike)

	Reporting	Spike	Sample	% Recov	ery % Recove	ery Acceptance	3
Analyte	Units	Level	Result	MS	MSD	Criteria	RPD
Chromium	mg/L (ppm)	5	0.41	87	92	80-120	6
Copper	mg/L (ppm)	5	0.43	87	91	80-120	4
Nickel	mg/L (ppm)	10	0.39	85	88	80-120	3
Zinc	mg/L (ppm)	5	0.07	86	88	80-120	2

Laboratory Code: Laboratory Control Sample

	Reporting	Spike	% Recove:	ry % Recov	ery Acceptanc	e	
Analyte	Units	Level	LCS	LCSD	Criteria	RPD	
Chromium	mg/L (ppm)	5	105	96	80-120	9	
Copper	mg/L (ppm)	5	106	90	80-120	16	
Nickel	mg/L (ppm)	10	106	99	80-120	7	
Zinc	mg/L (ppm)	5	108	103	80-120	5	

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 ·

904035 mm 4899 BIZ

SAMPLE CHAIN OF CUSTODY

City, State, Zip Seath out 98/31 Phone # 26-382878 FAX # 26-3824309 Date 4/8/27 Phone # 26-382878 FAX # 26-3824309 Date 4/8/27 PROJECT NAME PROJECT LOCATION SAMPLERS/Gignature/ PROJECT LOCATION SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Sample Analyses Sample # Sample Jars Lab Requested M 78 778 Yelfs 1032 H2D (Send Report To:	SKAN COPER	Norks	······································	Contact	Seneth Tho	npsow
SITE NO. PROJECT NAME PROJECT NAME PROJECT LOCATION PROJECT LOCATION SZBO & ALC S. SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Sample & Sample & Sample & Sample # Requested M 3 T 8 Sample # Requested M 3 T 8 Sample # Requested SIGNATURE PRINT NAME COMPANY Date Time Relinguished by: Retinguished by: Retinguished by: Retinguished by: Retinguished by: RETINE NAME RETINE TIME RETINE TIME RESIDUATION PROJECT NAME PROJECT NAME PROJECT NAME N 3 T 8 SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Samples Return Sample # Requested Analyses Requested N 3 T 8 Sample # Requested N 4 T 8 T 8 Sample # Time Relinquished by: Retinguished by: Retinguished by: Retinguished by: Retinguished by: Retinguished by:			5/2/2	., .	······································		<u> </u>
SITE NO. PROJECT NAME PURCHASE ORDER # TO SELS Monitor PROJECT LOCATION PROJECT LOCATION STARPLE DISPOSAL INFORMATION Dispose after 30 days Return Samples Sample # Sampled Sample Jars Sample # Requested M 3 THE NO. 12 HZD (O/ CR CN N/ ZN SIGNAFURE PROJECT LOCATION Dispose after 30 days Return Samples Requested M 3 THE NO. 12 HZD (O/ CR CN N/ ZN SIGNAFURE PRINT NAME COMPANY Date Time Relinguished by: Retinguished by: Retinguished by: Retinguished by: Retinguished by: RETINE NAME FOL 4 Y 9 9 11 100 Retinguished by: Retinguished by: RETINE NAME FOL 4 Y 9 9 11 100 Retinguished by: Retinguished by: RETINE NAME FOL 4 Y 9 9 11 100 Retinguished by:	Phone # 206-382-8	339			787- 470G	- Det (/8)	/50
SAMPLER (signature) SAMPLER (signature) PROJECT LOCATION 3200 Ch Are 5. SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Samples Sample # Sampled Sample Jars Sample # Requested M 7878 / 251 10:32 HzD (102 / 30-7	Date9/0/	01
SAMPLER (signature) PROJECT LOCATION 3200 CH Are S. SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Samples Call for Instructions Analyses Requested M 18 78 8 40 10 22 Hz0 (OJ CL Cu Ni Zu SIGNATURE PRINT NAME COMPANY Date Time Reciprosets Respirator Respir	SITE NO.					PURCHASE ORD	DER#
REMARKS REMARKS SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Samples Call for Instructions Call for Instructions Requested From the company of the compa	SAMPLED Signatura		metro s	reld n	nonitar	10 100	
REMARKS SAMPLE DISPOSAL INFORMATION Dispose after 30 days Return Samples Call for Instructions Requested M 18 78 46 1022 1120 (Oth Cu wi zw Requested Oth Cu wi zw Requested Call for Instructions Requested Requested From Cu wi zw Requested Call for Instructions Requested Requested Requested From Cu wi zw Requested From Cu wi zw Requested From Cu wi zw Requested Requested	Stim LERO (signature)				· · · · · · · · · · · · · · · · · · ·		rion
Sample # Date/Time Sample Type of Sample # Of Sample # Requested **Part Date/Time Sample For Sample For Sample # Sample # Requested **Part Date/Time Sample Type of Sample # Sample # Requested **Part Date/Time Sample Type of Sample # Requested **Part Date/Time Sample # Requested **Part Date/Time Sample # Requested **Part Date/Time Date/Time Date Time Date Time Date/Time Date/T	DEMARKS.	42					Tre 8;
Sample # Sampled Type of # of Lab Sample # Requested M 78778	REMARKS						
Sample # Sampled Sample # of Sample # Requested M + ST Sample # of Sample # of Cu Cu Ni Tu M + ST Sample H + Of Cu Cu Ni Tu M + ST Sample Sample H + Of Cu Cu Ni Tu M + ST Sample Sample H + Of Cu Ni Tu M + ST Sample Sample H + Of Cu Ni Tu M		•					lays
Sample # Sampled Sample Jars Sample # Requested MASTER PRINT NAME COMPANY Date Time Registration by Registration of the Regis							
Sample # Sampled Sample Jars Sample # Requested M78778 4/2/57 1013 2 HZD (O/ CL CN N/ ZN		Date/Time	Type of	# 0.5	Tab		
SIGNATURE PRINT NAME COMPANY Date Time Recipilistic Print ACM 1/853 1/20 R	Sample #						
SIGNATURE PRINT NAME COMPANY Date Time Religibilisher by: Grand A. Thopso ACM 1/853 1/20 Recovered to the first of the fi	m78778	4/8/5 10139	Hro	(01		()
SIGNATURE PRINT NAME COMPANY Date Time Relinguished by: Received to the first ACW 1889 1120 and Relinguished by: Relinguished by: Relinguished by:							, , , , ,
SIGNATURE PRINT NAME COMPANY Date Time Relinguished by: CLOOD AT Those ACM 1/8/29 1/20 and Received by: Received by: Relinguished by: Relinguished by:							
SIGNATURE PRINT NAME COMPANY Date Time Relinguished by: CLOOD AT Those ACM 1/8/29 1/20 and Received by: Received by: Relinguished by: Relinguished by:							
SIGNATURE PRINT NAME COMPANY Date Time Relinguished by: Received to the first ACW 1889 1120 and Relinguished by: Relinguished by: Relinguished by:							
SIGNATURE PRINT NAME COMPANY Date Time Relinguished by: Received to the first ACW 1889 1120 and Relinguished by: Relinguished by: Relinguished by:					_		
SIGNATURE PRINT NAME COMPANY Date Time Recipionished by: Recipionished by: Relinquished by: Relinquished by: Relinquished by:							
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:						<u> </u>	
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:							
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:							
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:			***************************************				
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:							
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:							
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:							
Received by: General K. Edington FB1 4899 11:00 11:00 Received by:							
Received by: General K. Edington FB1 4899 11:20 Relinquished by:							
Received by: K. Edington FB1 4899 11:20 Relinquished by:	SIGNATURE Religioushed tour	PF	UNT NAME			Date	Time
Received of KEdington FB1 4899 11:00	a Difference	GENOR	A. Thopso-	,	ACW	1/8/59	1/2000
Relinquished by:	Received by	1 / -	Y		EK (4 499	1 . 1
Received by:	Relinquished by:	1,000	Jan		<u> </u>		1. 29
	Received by:	·			**************************************		

FORMS/COC

04/02/99

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

April 27, 1999

DUPLICATE COPY

INVOICE #99ACU0427-3

Accounts Payable Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M78778: Results of testing requested by Gerry Thompson for material submitted on April 8, 1999.

FEDERAL TAX ID(b) (6)

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Charlene Jensen, M.S. Bradley T. Benson, B.S. Kurt Johnson, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044 e-mail: fbi@isomedia.com

April 27, 1999

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford St. Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on April 8, 1999 from your Metro Self Monitor, PO# M78778 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Manuel Marti Project Manager

Enclosures ACU0427R.DOC